

HISD Pacing Calendar — Physics

AUGUST 2015

Units of Instruction

Unit 1: Measuring and Describing Motion

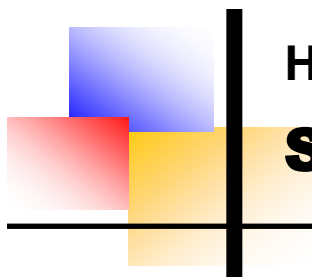
The focus of this unit is on measurement and quantitative observations, including tables, graphs, and equations, used in describing the motion of objects.

- ◊ Early Dismissal Days (2 1/2 hours early)
- Teacher Service Days
- Teacher Preparation Days
- △ Make-up Days (if needed)

This document offers suggestions for pacing instruction and does not replace the HISD Planning Guides.



Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
	Unit 1 Measuring and Describing Motion (8 lessons)					
30	31					
	Unit 1 Measuring and Describing Motion					



HISD Pacing Calendar — Physics

SEPTEMBER 2015

Units of Instruction

Unit 1: Measuring and Describing Motion

The focus of this unit is on measurement and quantitative observations, including tables, graphs, and equations, used in describing the motion of objects.

Unit 2: Motion in One Dimension

In this unit, students use kinematic equations to describe motion in one dimension including speed, velocity, distance, displacement, and acceleration.

Unit 3: Gravitational Force

Students are introduced to the four fundamental forces in physics. The rest of this unit focuses on the principles and calculations of gravitational force.

Snapshot Assessment # 1

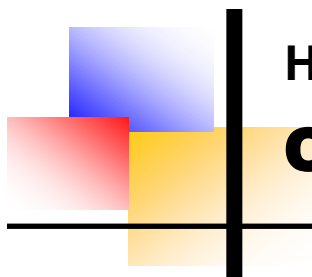
Suggested Window
September 21-25

- ◊ Early Dismissal Days (2 1/2 hours early)
- Teacher Service Days
- Teacher Preparation Days
- △ Make-up Days (if needed)

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Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
		Unit 1 Measuring and Describing Motion (8 lessons)		Unit 2 Motion in One Dimension (8 lessons)		
6	7	8	9	10	11	12
	Labor Day	Unit 2 Motion in One Dimension (8 lessons)				
13	14	15	16	17	18	19
	Unit 2 Motion in One Dimension (8 lessons)		Unit 3 Gravitational Force (6 lessons)			
20	21	22	23	24	25	26
	Snapshot Assessment 1					
	Unit 3 Gravitational Force (6 lessons)		Fall Holiday	Unit 3 Gravitational Force	<ul style="list-style-type: none"> Extend, Review Assess 	
27	28	29	30			
	<ul style="list-style-type: none"> Extend, Review Assess Reteach 					





HISD Pacing Calendar — Physics

OCTOBER 2015

Units of Instruction

Unit 4: Forces and Laws of Motion

The focus of this unit is describing the effect of forces on the motion of objects. Students calculate the effect of forces including the law of inertia, the relationship between force, mass, and acceleration, and action-reaction forces.

Unit 5: Free-body Diagrams

In this unit, students analyze forces by developing and interpreting free-body diagrams.

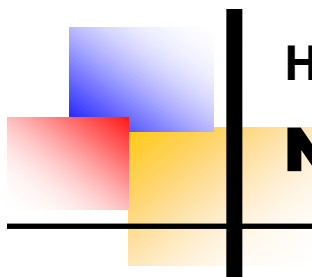
Snapshot Assessment # 2
Suggested Window
October 19-23

- ◊ Early Dismissal Days (2 1/2 hours early)
- Teacher Service Days
- Teacher Preparation Days
- △ Make-up Days (if needed)

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Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
				<div><ul style="list-style-type: none">• <i>Extend</i>• <i>Review</i>• <i>Assess</i>• <i>Reteach</i></div>		<div>End of 1st Cycle</div>
4	5	6	7	8	9	10
	Unit 4 Forces and Laws of Motion (14 lessons)					
11	12	13	14	15	16	17
	Unit 4 Forces and Laws of Motion (14 lessons)					
18	19	20	21	22	23	24
	Unit 4 Forces and Laws of Motion			Unit 5 Free-body Diagrams		
	Snapshot Assessment 1					
25	26	27	28	29	30	31
	Unit 5 Free-body diagrams (6 lessons)					



HISD Pacing Calendar — Physics

NOVEMBER 2015

Units of Instruction

Unit 6: Vectors and Motion in Two Dimensions

Students continue analyzing motion using vectors and kinematic equations for projectile and circular motion.

Unit 7: Momentum and Impulse

The focus for this unit is for students to calculate momentum, power, mechanical energy, and apply the impulse-momentum theorem in physical systems.

Unit 8: Work-Energy Theorem and Energy Transformations

In this unit, students investigate and calculate examples of the work-energy theorem and describe examples of energy transformations.

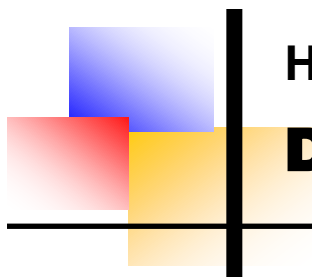
Snapshot Assessment # 3
Suggested Window
November 16-20

- ◊ Early Dismissal Days (2 1/2 hours early)
- Teacher Service Days
- Teacher Preparation Days
- △ Make-up Days (if needed)

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Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
	<div><ul style="list-style-type: none">• <i>Extend</i>• <i>Review</i>• <i>Assess</i>• <i>Reteach</i></div>					<div>End of 2nd Cycle</div>
8	9	10	11	12	13	14
	<div>Unit 6 Vectors and Motion in Two Dimensions (6 lessons)</div>					
15	16	17	18	19	20	21
	<div>Unit 6 Vectors and Motion in Two</div>	<div>Unit 7 Momentum and Impulse (6 lessons)</div>				
	<div>Snapshot Assessment 1</div>					
22	23	24	25	26	27	28
	<div>Unit 7 Momentum and Impulse (6 lessons)</div>		<div>Thanksgiving Holiday</div>	<div>Thanksgiving Holiday</div>	<div>Thanksgiving Holiday</div>	
29	30					
	<div>Unit 8 Work-Energy Theorem and Energy</div>					





HISD Pacing Calendar — Physics

DECEMBER 2015

Units of Instruction

Unit 8: Work-Energy Theorem and Energy Transformations

In this unit, students investigate and calculate examples of the work-energy theorem and describe examples of energy transformations.

Unit 9: Conservation of Energy and Momentum

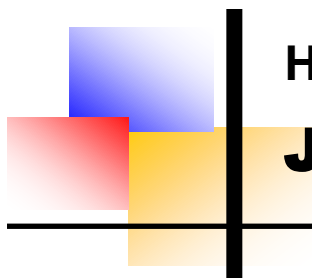
After calculating momentum and energy in various situations, students demonstrate and apply the laws of conservation of energy and momentum.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
		Unit 8 Work-Energy Theorem and Energy Transformations (6 lessons)				
6	7	8	9	10	11	12
	Unit 8 Work-Energy Theorem and Energy	Unit 9 Conservation of Energy and Momentum (4 lessons)				
13	14	15	16	17	18	19
	Final Exams					End of 3rd Cycle
20	21	22	23	24	25	26
	Winter Break	Winter Break	Winter Break	Winter Break	Winter Break	
27	28	29	30	31		
	Winter Break	Winter Break	Winter Break	Winter Break		

- ◊ Early Dismissal Days (2 1/2 hours early)
- Teacher Service Days
- Teacher Preparation Days
- △ Make-up Days (if needed)

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HISD Pacing Calendar — Physics

JANUARY 2016

Units of Instruction

Unit 10: Thermodynamics

In this unit, students investigate thermodynamic systems, give examples of different types of thermal energy transfer, and analyze and explain examples that illustrate the first and second laws of thermodynamics.

Unit 11: Wave Properties and Behaviors

Students investigate and interpret a variety of waves, their characteristics, and properties such as velocity, amplitude, frequency, and wavelength. Students also calculate wavespeed, frequency, and wavelength of different types of waves.

Unit 12: Sound

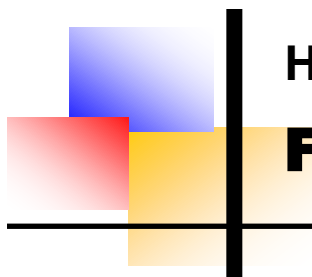
The focus of this unit is on investigating characteristics and behaviors of longitudinal waves such as sound waves.

- ◊ Early Dismissal Days (2 1/2 hours early)
- Teacher Service Days
- Teacher Preparation Days
- △ Makeup Days (if needed)

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Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1 <i>Winter Break</i>	2
3	4	5	6	7	8	9
	Unit 10 Thermodynamics (8 lessons)					
10	11	12	13	14	15	16
	Unit 10 Thermodynamics (8 lessons)				Unit 11 Wave Properties and Behaviors	
17	18	19	20	21	22	23
	<i>Martin Luther King, Jr. Day</i>	Unit 11 Wave Properties and Behaviors (8 lessons)				
24	25	26	27	28	29	30
	Unit 11 Wave Properties and Behaviors (8 lessons)			Unit 12 Sound (6 lessons)		
31						





HISD Pacing Calendar — Physics

FEBRUARY 2016

Units of Instruction

Unit 12: Sound

The focus of this unit is on investigating characteristics and behaviors of longitudinal waves such as sound waves.

Unit 13: Electromagnetic Waves and Applications of Waves

Students investigate characteristics and behaviors of transverse waves such as electromagnetic waves and investigate and describe the role of wave characteristics in a variety of medical and industrial applications such as mirrors, lenses, and fiber optics.

Unit 14: Electrical and Magnetic Forces

This unit focuses on electrical and magnetic forces and the relationship between the two.

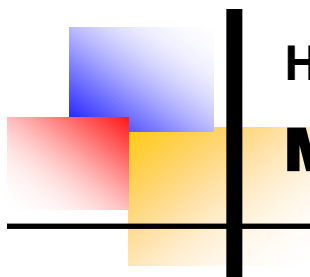
Snapshot Assessment # 4 & 5
Suggested Window
Feb 1-5 & Feb 29-March 4

- ◊ Early Dismissal Days (2 1/2 hours early)
- Teacher Service Days
- Teacher Preparation Days
- △ Makeup Days (if needed)

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Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
	Unit 12 Sound (6 lessons)				<ul style="list-style-type: none"> • Extend, • Review • Assess • Reteach 	
	Snapshot Assessment 1					
7	8	9	10	11	12	13
	<ul style="list-style-type: none"> • Extend • Review • Assess • Reteach 					End of 4th Cycle
14	15	16	17	18	19	20
	Unit 13 Electromagnetic Waves and Applications of Waves (8 lessons)					
21	22	23	24	25	26	27
	Unit 13 Electromagnetic Waves and Applications of Waves (8 lessons)			Unit 14 Electrical and Magnetic Forces (8 lessons)		
28	Snapshot					
	Unit 14 Electrical and Magnetic Forces					





HISD Pacing Calendar — Physics

MARCH 2016

Units of Instruction

Unit 14: Electrical and Magnetic Forces

This unit focuses on electrical and magnetic forces and the relationship between the two. Students calculate the electric force between objects and investigate the relationship between electric and magnetic forces in everyday applications.

Unit 15: Electric Circuits

In this unit, students design, construct, and analyze series and parallel circuits using calculations for potential difference, resistance, and power by electric circuit elements.

Snapshot Assessment # 4

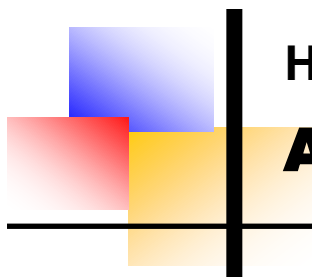
Suggested Window
Feb 29—March 4

- ◊ Early Dismissal Days (2 1/2 hours early)
- Teacher Service Days
- Teacher Preparation Days
- △ Make-up Days (if needed)

This document offers suggestions for pacing instruction and does not replace the HISD Planning Guides.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
		Snapshot Assessment 1				
		Unit 14 Electrical and Magnetic Forces (8 lessons)				
6	7	8	9	10	11	12
	Unit 14 Electrical and Magnetic Forces	Unit 15 Electric Circuits (8 lessons)				
13	14	15	16	17	28	19
	Spring Break	Spring Break	Spring Break	Spring Break	Spring Break	
20	21	22	23	24	25	26
	Unit 15 Electric Circuits (8 lessons)				Spring Holiday	
27	28	29	30	31		
	<ul style="list-style-type: none"> • Extend • Review • Assess • Reteach 					





HISD Pacing Calendar — Physics

APRIL 2016

Units of Instruction

Unit 16: Atomic Physics and Photoelectric Effect

Students investigate atomic and quantum phenomena including the dual nature of light, nuclear forces and stability, and the significance of mass-energy equivalence.

Unit 17: Applications of Atomic and Nuclear Physics

Students investigate examples of atomic, nuclear, and quantum phenomena in everyday applications.

Snapshot Assessment # 6

Suggested Window

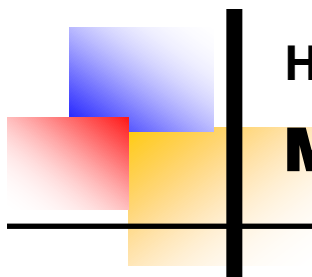
Apr. 4-8

- ◊ Early Dismissal Days (2 1/2 hours early)
- Teacher Service Days
- Teacher Preparation Days
- △ Makeup Days (if needed)

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Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
					<div> <ul style="list-style-type: none"> • Extend • Review • Assess • Reteach </div>	<div>End of 5th Cycle</div>
3	4	5	6	7	8	9
	Snapshot Assessment 1					
	Unit 16 Atomic Physics and Photoelectric Effect					
10	11	12	13	14	15	16
	Unit 16 Atomic Physics and Photoelectric Effect	Unit 17 Applications of Atomic and Nuclear Physics (4 lessons)				
17	18	19	20	21	22	23
	<div> <ul style="list-style-type: none"> • Extend • Review • Assess • Reteach </div>					
24	25	26	27	28	29	30
	<div> <ul style="list-style-type: none"> • Extend • Review • Assess • Reteach </div>					





HISD Pacing Calendar — Physics

MAY 2016

Units of Instruction

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
STAAR EOC Assessment Window: Non-ELA Courses						
8	9	10	11	12	13	14
	<ul style="list-style-type: none"> • Extend • Review • Assess • Reteach 					
15	16	17	18	19	20	21
	<ul style="list-style-type: none"> • Extend • Review • Assess • Reteach 			Final Exams		
22	23	24	25	26	27	28
	Final Exams					
						End of 6th Cycle
29	30	31				
	Memorial Day					

- ◊ Early Dismissal Days (2 1/2 hours early)
- Teacher Service Days
- Teacher Preparation Days
- △ Make-up Days (if needed)

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